

Notice of Allowability

Application No.

09/842,495

Applicant(s)

SHANTHAVEERAIHAH ET AL.

Examiner

Cam Y T. Truong

Art Unit

2162

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 10/18/2006.
2. ☒ The allowed claim(s) is/are 1-15,23-30,32-59,67 and 68.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date 11/10/02, 11/15/04, 3/7/05, 11/23/05
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material 12/27/05
5. ☐ Notice of Informal Patent Application
6. ☒ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

Cam Y Truong
Primary Examiner
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DETAILED ACTION

1. Claims 1-15, 23-30, 32-59 and 67-68 are pending in this Office Action.

EXAMINER'S AMENDMENT

2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Attorney Robert C. Kowert on 11/30/2006.

In the claims:

Please replace claims 1, 4, 9, 23, 33, 43, 47, 52 and 67 with amended claims 1, 4, 9, 23, 33, 43, 47, 52 and 67.

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1. (Currently amended) A computer-implemented method for discovering fabric devices, comprising:

receiving a list from a fabric driver of fabric devices available to a host system,

wherein the fabric driver is part of an operating system for the host system;

receiving a request to select a subset of the fabric devices from the list;

requesting the fabric driver to create an operating system device node in the host system for each of the fabric devices in the subset not already online,

wherein each operating system device node provides a mechanism for accessing a corresponding one of the subset of fabric devices through the operating system executing on the host system; and

creating the operating system device node in the host system for each of the fabric devices in the subset not already online, and wherein said creating the operating system device node comprising writing the operating system device node into a memory.

4. (Currently amended) A method for discovering fabric devices, comprising:

providing a list of fabric devices available to a host system;

receiving a request to create operating system device nodes in the host system for each fabric device in a selected subset of the fabric devices available to the host system; and

creating an operating system device node in the host system for each of the fabric

devices in the selected subset not already online, wherein each operating system device node provides a mechanism for accessing a corresponding one of the subset of fabric devices through an operating system executing on the host System, and wherein said creating the operating system device node comprising writing the operating system device node into a memory.

9. (Currently amended) A method for discovering devices attached to a storage network, comprising:

- receiving a request to identify devices attached to the storage network which are available to a host system;
- requesting the storage network to identify devices attached to the storage network which are available to the host system;
- receiving a list of the identified devices;
- receiving a request to on-line a subset of the identified devices; and
- creating an operating system device node within the host system for each of the identified devices in the subset that is not already online, wherein each operating system device node provides a mechanism for accessing a corresponding one of the subset of the identified devices through an operating system executing on the host system and wherein said creating the operating system device node comprising writing the operating system device node into a memory.

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23. (Currently amended) A host system, comprising:

one or more adapter ports for connecting to a fabric;

a tangible computer readable storage medium encoded with program instructions computer-executable to implement:

a fabric driver configured to interface the host system to the fabric, wherein the fabric driver is part of an operating system for the host system;

an application configured to request the fabric driver to provide a list of fabric devices attached to the fabric that are visible to the host system through one of said adapter ports;

wherein the fabric driver is further configured to provide the list of fabric devices to the application in response to the request from the application;

wherein the application is further configured to indicate to the fabric driver a selected subset of the fabric devices from the list to be brought online for access from the host system; and

wherein the fabric driver is further configured to online the selected subset of fabric devices so that the selected subset of fabric devices are accessible from the host system, wherein the fabric driver is further configured to create operating system device nodes within the host system for each device of the selected subset, wherein each operating system device node provides a mechanism for accessing a corresponding one of the subset of fabric devices through the operating system executing on the host system.

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33. (Currently amended) The host system as recited in claim 32, wherein said discovery mechanism is configured to execute in response to a reboot of the host system, and wherein said application is configured to execute on the host system subsequent to said reboot and discovery process.

43. (Currently amended) A computer readable storage medium having stored thereon data representing sequences of instructions, wherein the sequences of instructions are executable by one or more processors to implement:

receiving a list from a fabric driver of fabric devices available to a host system,

wherein the fabric driver is part of an operating system for the host system;

receiving a request to select a subset of the fabric devices from the list;

requesting the fabric driver to create an operating system device node in the host system for each of the fabric devices in the subset not already online,

wherein each operating system device node provides a mechanism for accessing a corresponding one of the subset of fabric devices through the operating system executing on the host system; and

creating the operating system device node in the host system for each of the fabric devices in the subset not already online, and wherein said creating the operating system device node comprising writing the operating system device node into a memory.

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47. (Currently amended) A computer readable storage medium having stored thereon data representing sequences of instructions, wherein the sequences of instructions are executable by one or more processors to implement:

providing a list of fabric devices available to a host system;

receiving a request to create operating system device node in the host system for each fabric device in a selected subset of the fabric devices available to the host system; and

creating an operating system device node in the host system for each of the fabric devices in the selected subset not already online, wherein each operating system device node provides a mechanism for accessing a corresponding one of the subset of fabric devices through an operating system executing on the host system, and wherein said creating the operating system device node comprising writing the operating system device node into a memory.

52. (Currently amended) A computer readable storage medium having stored thereon data representing sequences of instructions, wherein the sequences of instructions are executable by one or more processors to implement:

receiving a request to identify devices attached to storage network which are available to a host system;

requesting the storage network to identify devices attached to the storage network which are available to the host system;

receiving a list of the identified devices;

receiving a request to on-line a subset of the identified devices; and

creating an operating system device node within the host system for each of the identified devices in the subset that is not already online, wherein each operating system device node provides a mechanism for accessing a corresponding one of the subset of the identified devices through an operating system executing on the host system; and

wherein said creating the operating system device node comprising writing the operating system device node into a memory.

67. (Currently amended) A method for discovering fabric devices, comprising:

viewing a list of fabric devices available to a host system;

selecting a subset of the fabric devices from the list; and requesting that each of the fabric devices in the subset be brought online if not already online for use from the host system, wherein each fabric device that is online has a corresponding operating system device node that provides a mechanism for accessing a corresponding one of the subset of the identified devices through an operating system executing on the host system;

creating an operating system device node in the host system for each of the fabric devices in the subset not already online, and wherein said creating the operating system device node comprising writing the operating system device node into a memory; and

wherein said viewing, selecting and requesting are performed via a computer system user interface.

Allowable Subject Matter

3. Claims 1-15, 23-30, 32-59 and 67-68 are allowed.

The prior art of record, alone or in combination, does not teach or fairly suggest the combination of steps as recited in independent claim 1 "requesting the fabric driver to create an operating system device node in the host system for each of the fabric devices in the subset not already online, wherein each operating system device node provides a mechanism for accessing a corresponding one of the subset of fabric devices through the operating system executing on the host system; and creating the operating system device node in the host system for each of the fabric devices in the subset not already online, and wherein said creating the operating system device node comprising writing the operating system device node into a memory";

The prior art of record, alone or in combination, does not teach or fairly suggest the combination of steps as recited in independent claim 4, wherein "creating an operating system device node in the host system for each of the fabric devices in the selected subset not already online, wherein each operating system device node provides a mechanism for accessing a corresponding one of the subset of fabric devices through an operating system executing on the host System; and wherein

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said creating the operating system device node comprising writing the operating system device node into a memory”;

The prior art of record, alone or in combination, does not teach or fairly suggest the combination of steps as recited in independent claim 9, wherein “creating an operating system device node within the host system for each of the identified devices in the subset that is not already online, wherein each operating system device node provides a mechanism for accessing a corresponding one of the subset of the identified devices through an operating system executing on the host system and wherein said creating the operating system device node comprising writing the operating system device node into a memory”;

The prior art of record, alone or in combination, does not teach or fairly suggest the combination of steps as recited in independent claim 23 “wherein the application is further configured to indicate to the fabric driver a selected subset of the fabric devices from the list to be brought online for access from the host system; and wherein the fabric driver is further configured to online the selected subset of fabric devices so that the selected subset of fabric devices are accessible from the host system, wherein the fabric driver is further configured to create operating system device nodes within the host system for each device of the selected subset, wherein each operating system device node provides a mechanism for accessing a corresponding one of the subset of fabric devices through the operating system executing on the host system;

The prior art of record, alone or in combination, does not teach or fairly suggest the combination of steps as recited in independent claim 43, wherein requesting the fabric driver to create an operating system device node in the host system for each of the fabric devices in the subset not already online, wherein each operating system device node provides a mechanism for accessing a corresponding one of the subset of fabric devices through the operating system executing on the host system; and creating the operating system device node in the host system for each of the fabric devices in the subset not already online, and wherein said creating the operating system device node comprising writing the operating system device node into a memory;

The prior art of record, alone or in combination, does not teach or fairly suggest the combination of steps as recited in independent claim 47, wherein creating an operating system device node in the host system for each of the fabric devices in the selected subset not already online, wherein each operating system device node provides a mechanism for accessing a corresponding one of the subset of fabric devices through an operating system executing on the host system, and wherein said creating the operating system device node comprising writing the operating system device node into a memory;

The prior art of record, alone or in combination, does not teach or fairly suggest the combination of steps as recited in independent claim 52, wherein creating a operating system device node within the host system for each of the identified devices in the subset that is not already online, wherein each operating system device

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node provides a mechanism for accessing a corresponding one of the subset of the identified devices through an operating system executing on the host system; and wherein said creating the operating system device node comprising writing the operating system device node into a memory; and

The prior art of record, alone or in combination, does not teach or fairly suggest the combination of steps as recited in independent claim 67, wherein requesting that each of the fabric devices in the subset be brought online if not already online for use from the host system, wherein each fabric device that is online has a corresponding operating system device node that provides a mechanism for accessing a corresponding one of the subset of the identified devices through an operating system executing on the host system; creating the operating system device node in the host system for each of the fabric devices in the subset not already online, and wherein said creating the operating system device node comprising writing the operating system device node into a memory.

Contact Information

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cam Y T. Truong whose telephone number is (571) 272-4042. The examiner can normally be reached on Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Breene can be reached on (571) 272-4107. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Cam Y T Truong
Primary Examiner
Art Unit 2162
12/2/2006